ONLINE APPENDIXES 2B

Physician services

ONLINE APPENDIX 2B-A

Access to physician care

TABLE 2B–A1

Access to physician care for Medicare beneficiaries is similar to or better than that for privately insured individuals in urban and rural areas, 2009

	Medicare (age 65 or older)			Private insurance (age 50–64)		
Survey question	**All**	**Urban**	**Rural**	**All**	**Urban**	**Rural**
Unwanted delay in getting an appointment: Among those who needed an appointment, "How often did you have to wait longer than you wanted to get a doctor's appointment?"						
For routine care						
Never	77%*	76%*	78%	71%*	71%*	74%
Sometimes	17*	17*	17	22*	23*	19
Usually	2*	3	2*	3*	3	4*
Always	2	2	2	3	3	3
For illness or injury						
Never	85*	85*	85*	79*	78*	80*
Sometimes	11*	10*	12	17*	18*	15
Usually	2	2	1*	2	1†	3*†
Always	1	1	0	2	2	1
Looking for a new physician: "In the past 12 months, have you tried to get a new primary care doctor?"						
Yes	6	7	6	8	8	8
No	93	93	94	92	92	92
Getting a new physician: Among those who tried to get an appointment with a new physician, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it…"						
Primary care physician						
No problem	78	80	73	71	74†	56†
Small problem	10	10	8	8	7	12
Big problem	12*	10*	18	21*	19*†	32†
Specialist						
No problem	88	88	88	84	85	79
Small problem	7	6	8	9	9	9
Big problem	5	5	4	7	6†	12†
Not accessing a doctor for medical problems: "During the past 12 months, did you have any health problem or condition about which you think you should have seen a doctor or other medical person, but did not?" (Percent answering "Yes")	7*	6*	8	11*	11*	10

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample size for each group (Medicare and privately insured) is 4,000. Sample sizes for individual questions varied.
* Indicates a statistically significant difference between the Medicare and privately insured samples within the same area type at a 95 percent confidence level.
† Indicates a statistically significant difference between rural and urban areas within the same insurance coverage category at a 95 percent confidence level.

Source: MedPAC-sponsored telephone survey, conducted August–October 2009.

ONLINE APPENDIX 2B-B

Development of the Medicare Ambulatory Care Indicators for the Elderly

The Commission developed a set of indicators to analyze ambulatory care quality through Medicare claims data. These indicators are called the Medicare Ambulatory Care Indicators for the Elderly (MACIEs). An earlier version of the indicators was initially developed in the mid-1990s by a research team at RAND that sought measures of care that were both clinically meaningful and could feasibly be analyzed from inpatient and outpatient claims data (Asch et al. 2000).[1] In May 2004, the Commission convened an expert panel of physicians, clinicians, and researchers to review and update the original indicators to reflect current medical practice. The experts reviewed clinical evidence from existing clinical guidelines, other organizations' efforts to identify and use ambulatory indicators, and the limits of claims data.[2]

The panel's revised set of indicators—the MACIEs—are designed to reflect basic clinical standards of care for common medical diagnoses (Westrick and Kogut 2006). The MACIEs include two types of measures: (1) the percentage of beneficiaries with a given diagnosis who received clinically necessary services for their diagnoses (32 indicators) and (2) the percentage of beneficiaries with a given diagnosis who had potentially avoidable hospitalizations directly related to their diagnoses (6 indicators).

Building off the initial work for these indicators, "clinically necessary services" are defined as routine care for which:

- the benefits of the service outweigh its risk,
- the benefits to the patient are likely and substantial, and
- physicians have judged that not recommending the care would be inappropriate.

Asch and colleagues further describe this definition of routine necessary care in published research (Asch et al. 2000). Measures of potentially avoidable hospitalizations include use of emergency department services and inpatient hospitalizations that might have been averted had patients received better ambulatory disease management and treatment.

The MACIEs include medical conditions:

- that have a high prevalence or incidence among the elderly population,
- for which effective medical treatment is available, and
- that are readily identifiable from diagnoses coded on Medicare claims.

Under these criteria, the current MACIE analysis focuses on the following medical conditions: anemia, gastrointestinal bleeding, breast cancer, colon cancer, coronary artery disease, diabetes, congestive heart failure, depression, hypertension, chronic obstructive pulmonary disease, and stroke.

The MACIEs reflect minimum standards of acceptable care for certain diagnoses. For example, they include lipid testing for people with coronary artery disease. The MACIE indicators are not intended to show optimal care, and they cannot account for reasons why patients do not receive necessary care. Because these measures can be derived from claims data, they provide a resource-efficient method to monitor potential underuse of necessary medical services by Medicare beneficiaries. While we are using these indicators as a measure of quality, needed services may not be provided for a number of reasons, including problems accessing the health care system, failure of providers to perform or recommend services, or failure of beneficiaries to follow provider recommendations to obtain care. Additionally, there may be circumstances for which the indicated services are in fact contraindicated, such as for patients with certain comorbidities. The data analysis specifications for the MACIEs take specific steps to assign accurate diagnoses, but all claims data analyses are subject to diagnosis coding errors in the underlying claims files.[3]

The MACIEs data analysis requires two years of claims data for each beneficiary cohort in order to check for service use within a specified amount of time (e.g., eye exam within two-year period for diabetics). Therefore, the data set is restricted to the population of beneficiaries who were continuously in Medicare fee-for-service during the two-year study period. Consequently, beneficiaries were excluded from the data set if, during the study period, they died, were newly enrolled in Medicare, used hospice care, or were in managed care. Beneficiaries younger than age 65 were also excluded from the sample. For purposes of our physician payment update analysis, we track these quality indicators in the aggregate. Further analysis on quality and access to care could compare MACIEs for specified subpopulations, such as by geographic location, income status, or other factors. ■

ONLINE APPENDIX 2B-C

Medicare Ambulatory Care Indicators for the Elderly

TABLE 2B–C1 **Descriptions of various Medicare Ambulatory Care Indicators for the Elderly (MACIEs)**

Indicator	Description
Diabetes	
1. Eye exam in diagnosis of diabetes mellitus	Comprehensive eye exam at least every two years (the measurement year or prior year), for patients with at least 2 outpatient visits or 1 inpatient stay with diabetes mellitus diagnosis code, within a calendar year.
2. Hemoglobin A1c (HbA1c) testing in diagnosis of diabetes mellitus	HbA1c test at least once per year (the measurement year), in patients with at least 2 outpatient visits or 1 inpatient stay with diabetes mellitus diagnosis code, within a calendar year.
3. Lipid testing in diagnosis of diabetes mellitus	Lipid profile at least every year (the measurement year), in patients with at least 2 outpatient visits or 1 inpatient stay with diabetes mellitus diagnosis code, within a calendar year.
4. Clinical assessment in diagnosis of diabetes mellitus	Two outpatient visits (with or without diagnosis code for diabetes mellitus) during the measurement year, in patients identified as having diabetes mellitus (defined as patients with at least 2 outpatient visits or 1 inpatient stay with diabetes mellitus diagnosis code) in the year prior to the measurement year.
5. Follow-up after hospitalization for diabetes mellitus	At least 1 ambulatory, nonemergent visit (with or without diagnosis code for diabetes mellitus) within 4 weeks following discharge of patients hospitalized for diabetes mellitus.
6. Hospital admissions for serious short-term complications of diabetes mellitus *(Potentially avoidable hospitalizations indicator)*	Hospital admissions for diabetic, hyperosmolar, or ketotic coma and admissions for uncontrolled diabetes mellitus among patients with at least 2 outpatient visits or 1 inpatient stay with diabetes mellitus diagnosis code within a calendar year.
7. Hospital admissions for serious long-term complications of diabetes mellitus *(Potentially avoidable hospitalizations indicator)*	Hospital admissions for renal, ophthalmologic, neurologic, and circulatory complications of diabetes mellitus, and nontraumatic lower extremity amputation, among patients with at least 2 outpatient visits or 1 inpatient stay with diabetes mellitus diagnosis code within a calendar year.
Coronary artery disease	
8. Lipid testing in diagnosis of coronary artery disease (CAD)	Lipid profile testing at least every year (the measurement year) in patients with at least 2 outpatient visits or 1 inpatient stay with CAD diagnosis codes within a calendar year.
9. Follow-up after hospitalization for acute myocardial infarction (AMI)	At least 1 outpatient, nonemergent visit within 4 weeks following discharge of patients hospitalized for AMI.
10. Clinical assessment in diagnosis of CAD	Two outpatient visits during the measurement year for patients identified as having CAD (those with at least 2 outpatient visits or 2 inpatient stays with a CAD diagnosis code) in the year prior to the measurement year.
11. Emergency department (ED) use for unstable angina *(Potentially avoidable ED utilization indicator)*	Three or more emergency department visits for CAD, unassociated with admission, for patients identified with CAD (those with at least 2 outpatient visits or 1 inpatient stay with a CAD diagnosis code) in the measurement year.

TABLE 2B–C1 **Descriptions of various Medicare Ambulatory Care Indicators for the Elderly (MACIEs)**

Indicator	Description
Stroke, transient ischemia, atrial fibrillation, hypertension	
12. Carotid imaging at initial diagnosis of carotid artery stroke	Carotid angiogram or noninvasive carotid imaging procedure within 2 weeks of initial diagnosis in patients hospitalized for carotid artery stroke.
13. Carotid imaging in carotid endarterectomy (CEA)	Carotid imaging to CEA interval of less than 2 months in patients with a hospitalization for stroke or transient ischemic attack (TIA) as a primary diagnosis prior to the CEA.
14. Follow-up after hospitalization for stroke or TIA	At least 1 outpatient, nonemergent visit (with or without diagnosis code for stroke or TIA) within 4 weeks following discharge of patients hospitalized for stroke or TIA.
15. Clinical assessment for history of stroke or TIA	Two outpatient visits (with or without diagnosis code for stroke or TIA) during the measurement year, in patients identified as having stroke or TIA (with 2 outpatient visits or inpatient stays with diagnosis code for stroke or TIA) in the year prior to the measurement year.
16. Hospital admissions for hypertension *(Potentially avoidable hospitalizations indicator)*	At least 1 hospitalization with hypertension as the primary diagnosis, in patients with 2 or more outpatient visits or 1 inpatient stay with a diagnosis code for hypertension in the measurement year.
Heart failure	
17. Left ventricular ejection fraction (LVEF) assessment in diagnosis of heart failure: At initial diagnosis	Diagnostic ultrasound, radionuclide ventriculography (RVG), or left ventriculogram within 3 months before or after initial diagnosis of heart failure. Initial diagnosis defined by 1 year look-back period free of diagnosis codes for heart failure.
18. LVEF assessment in diagnosis of heart failure: Associated with hospitalization	Diagnostic ultrasound, RVG, or left ventriculogram within 3 months before or after hospitalization for heart failure.
19. Laboratory testing in heart failure	Laboratory tests to measure electrolytes and renal function during the measurement year, in patients with 2 outpatient visits or 1 inpatient stay with heart failure diagnosis codes within the previous calendar year.
20. Electrocardiogram (EKG) after initial diagnosis of heart failure	EKG within 1 month before or 3 months after initial diagnosis of heart failure. Initial diagnosis requires 12-month look-back period free of heart failure diagnosis codes.
21. Chest X-ray (CXR) after initial diagnosis of heart failure	CXR within 1 month before or 3 months after initial diagnosis of heart failure. Initial diagnosis requires 12-month look-back period free of heart failure diagnosis codes.
22. Follow-up after hospitalization for heart failure	At least 1 ambulatory, nonemergent visit (with or without diagnosis code for heart failure) within 4 weeks following discharge of patients hospitalized for heart failure.

TABLE 2B–C1 **Descriptions of various Medicare Ambulatory Care Indicators for the Elderly (MACIEs)**

Indicator	Description
23. Clinical assessment in heart failure	At least 2 outpatient visits (with or without diagnosis code for heart failure) during the measurement year in patients identified as having heart failure (with 2 outpatient visits or 1 inpatient stay with heart failure diagnosis code) in the year prior to the measurement year.
24. Hospital admissions for heart failure *(Potentially avoidable hospitalizations indicator)*	Hospital admissions for heart failure in the measurement year among patients with 2 outpatient visits or 1 inpatient stay with heart failure diagnosis code in the year prior to the measurement year.
Cancer	
25. Breast cancer screening	Mammogram every 2 years in female patients age 65–74.
26. Biopsy to therapy interval in diagnosis of breast cancer	Breast biopsy to definitive therapy (surgical, radiation, chemotherapy) interval less than 3 months in patients diagnosed with breast cancer (at least 1 outpatient visit or inpatient stay with breast cancer diagnosis code) and eventual definitive therapy.
27. Chest X-ray at initial diagnosis of breast cancer	CXR within 3 months before or 3 months after initial diagnosis of breast cancer. Index diagnosis of breast cancer must occur 3 months or longer before the end of the measurement year. Index diagnosis of breast cancer must be preceded by at least 12 months free of breast cancer diagnosis codes.
28. Breast imaging at initial diagnosis of breast cancer	Mammogram or other breast imaging within 3 months before or 3 months after initial diagnosis of breast cancer. Index diagnosis of breast cancer must occur 3 months or longer before the end of the measurement year. Index diagnosis of breast cancer must be preceded by at least 12 months without breast cancer diagnosis codes.
29. Mammography surveillance in diagnosis of breast cancer	At least 1 mammogram (inpatient or outpatient) within a 12-month period that includes inpatient stay or outpatient visit with diagnosis of breast cancer.
30. Colonoscopic surveillance after diagnosis of colorectal cancer	At least 1 inpatient stay or outpatient visit coded for colonoscopy within 12 months of inpatient stay coded for resection of colorectal cancer.
31. Gastrointestinal (GI) tract work-up after initial diagnosis of iron-deficiency anemia	Colonoscopy or barium enema within 1 month before or 3 months after initial diagnosis of iron-deficiency anemia. The index diagnosis of iron-deficiency anemia must be preceded by a 12-month period free of the iron-deficiency anemia diagnosis.
Anemia and gastrointestinal bleeding	
32. Follow-up visit after hospitalization for GI bleed	At least 1 visit (with or without diagnosis code for GI bleed) within 4 weeks following discharge of patients hospitalized for GI bleed.
33. Follow-up visit after initial diagnosis of GI bleeding	At least 1 outpatient visit or inpatient stay, with or without diagnosis code for GI bleed, within 4 weeks following initial diagnosis of GI bleed (outpatient only). Index diagnosis of GI bleed must be preceded by a 12-month period free of diagnosis of GI bleed.
34. Follow-up lab test after hospitalization for GI bleeding	At least 1 hemoglobin or hematocrit test within 4 weeks following discharge of patients hospitalized for primary diagnosis of GI bleed.

TABLE 2B–C1 **Descriptions of various Medicare Ambulatory Care Indicators for the Elderly (MACIEs)**

Indicator	Description
35. Follow-up lab test after initial diagnosis of anemia	Hemoglobin or hematocrit test within 1 to 6 months after an initial diagnosis of anemia. Index diagnosis of anemia must be preceded by at least 12 months free of anemia diagnosis codes.
Chronic obstructive pulmonary disease	
36. Clinical assessment in diagnosis of chronic obstructive pulmonary disease (COPD) or asthma	At least 2 outpatient visits (with or without diagnosis code for COPD or asthma) during the measurement year, in patients identified as having COPD or asthma (at least 2 outpatient visits or inpatient stays with diagnosis of COPD or asthma) in the year before the measurement year.
37. Hospital admissions for respiratory diagnosis in diagnosis of COPD or asthma *(Potentially avoidable hospitalizations indicator)*	Hospital admissions for respiratory diagnoses among patients with COPD, including asthma (defined as patients with at least 2 outpatient visits or inpatient stays with diagnosis code for COPD or asthma), in the measurement year.
Depression	
38. Follow-up after hospitalization for depression	At least 1 outpatient visit (with or without diagnosis code for depression) within 2 weeks following discharge of patients hospitalized for depression.

Endnotes

1 MACIEs were formerly called Access to Care for the Elderly Project (ACE–PRO) indicators.

2 Sources of guidelines included: the National Guidelines Clearinghouse, the American Heart Association U.S. Preventive Services Task Force, the American Diabetes Association, the Institute of Clinical Systems Improvement (ICSI), the National Cholesterol Education Program's Third Adult Treatment Panel, and the National Cancer Institute. In addition to the original ACE–PRO indicators, measures for consideration in the selected conditions/topics were identified from the following sources: the National Quality Measures Clearinghouse, the Physician Consortium for Performance Improvement, the National Health Quality Report, the Veterans Administration, National Committee for Quality Assurance, National Diabetes Quality Improvement Alliance, ICSI, CMS, the Agency for Healthcare Research and Quality, and the Script Project.

3 To assign the most accurate diagnosis possible, the MACIE analysis often requires that the specified diagnosis be on at least two physician or outpatient claims or on one inpatient claim. The use of two codes within a year increases positive predictive value and decreases the false positives likely associated with testing for a condition.

References

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